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ABSTRACT

Summarizing a two-part general report on a reading assessment of grades 8 and 12 in the province of British Columbia, this report provides the general background on the aims and methods of the assessment, presents information on the development of the test instrument, details the administration of the test, and reports its results. In addition, the report outlines the instructional practices in the secondary schools of British Columbia and summarizes the recommendations from the general report on test results and instructional practices. Appendixes provide the following: a guide to the British Columbia reading assessment general report; the contract team and management committee that contributed to the reading assessment program; the reading review panels that examined and amended the proposed objectives of the reading assessment before the student tests were developed; a list of the schools that participated in the pilot study; the panels that interpreted the test results; the timetable used in the program; and tables of the test results and interpretations according to grade. (MAI)

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THE B. C. READING ASSESSMENT

SUMMARY REPORT

This report was prepared for the Learning Assessment Branch of the

Ministry of Education

by

The Reading Assessment Contract Team

in co-operation with

The Reading Assessment Management Committee

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October 1977

CS004522

The British Columbia Reading Assessment

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PREFACE

The General Report on Secondary Reading in British Columbia consists of two parts - one concerned with student performance, the second with instructional practices. That report is the result of hundreds of pages of computer print outs, derived from tests taken by 65,882 students in Grades 8 and 12 and from questionnaires answered by 1,409 teachers at these levels. This present report is a summary of the more complete report which is in itself a distillation of a vast quantity of numerical data. It would therefore be inappropriate and unwise to use this report as a complete and authoritative statement of the findings of the assessment without referring to the General Report for more complete information.

This summary consists of five chapters and appendices. Chapter 1 gives general background information on the assessment, its aims and methods. Chapter 2 presents information on the development of the test instrument and the test administration. Chapter 3 summarizes the results of the test administration. Chapter 4 reviews the findings pertaining to instructional practices, and Chapter 5 sets out the conclusion and recommendations. The appendices provide a guide to the General Report and assessment details.

The Contract Team wishes to thank all those who participated in the project.

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For the convenience of the reader, brief summaries of findings are presented at intervals in this report. In this regard, the reader is directed to:

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THE ASSESSMENT IN OVERVIEW

Nearly all students in Grades 8 and 12 and 1,409 secondary school teachers participated in an assessment of Reading in British Columbia's secondary schools. The students completed a test designed to measure the extent of development of basic reading skills in three Domains or areas: word meaning, comprehension of prose, and application of reading skills. The teachers completed a questionnaire which sought information on instructional preferences and practices. Panels of educators and lay persons reacted to materials and procedures used in the assessment and also evaluated the performance of students on the two tests.

All this activity and cooperation has resulted both in a large bank of specific data about pupil performance and instructional practices in reading and in a general heightened awareness of the problems associated with reading instruction. Among the major findings of the Reading Assessment are the following:

- While students of both grades demonstrated acceptable skill in dealing with vocabulary and in understanding narrative and descriptive prose, their ability to fill out forms, read newspapers and understand advertisements was only marginally satisfactory. While the results relating to the students' ability to read "every-day" materials are not alarming, they definitely indicate the need for special attention in secondary school reading programs to increase the ability of students to deal with such materials.

- The analysis of instructional goals and practices revealed that in many secondary schools insufficient attention is being given to systematic instruction in developmental and remedial reading instruction. Even in terms of the teachers' own goals and stated priorities, the instructional program fell short in many instances. The disappointing performance of students on the application of reading skills (reading of "every-day" materials) can probably be directly linked to the lack of instructional emphases the skills involved receive.

- Average performances at times may hide deficiencies or needs of special groups of students within the population and those at the extremes of the performance range. There are, for instance, a number of 12th graders, many of whom aim to enter the job market immediately or go on to vocational training, who are inadequately prepared in terms of basic literacy skills.

- Numerous variables are related to student performance in as yet undetermined ways. For example, television viewing, newspaper reading, and student mobility all appear to be associated with variations in performance. The specific effects of these variables on student performance must be identified and used to the student's advantage.

- Comprehensive, high quality reading programs are available on only a limited basis in the secondary schools of British Columbia for a variety of reasons, including a shortage of trained personnel -- a factor which should be amenable to treatment.

- Comparisons between the performance of Grades 8 and 12, and of scores of 4th and 8th Grade students raise some doubts regarding progress made by students in reading competence as they move through the school system.

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At the Grade 8 level, the small increase in scores between Grades 4 and 8 points inescapably to limitations in the reading program in the intermediate elementary grades (4 to 7). Similarly, while 12th Grade students perform at higher levels than 8th graders, their ability to handle out-of-school or "every-day" reading materials could be developed to higher levels during the junior and senior secondary grades.

Recommendations, comprised of some 38 statements addressed to a range of institutions, groups and individuals in B.C. education, include suggestions for skill development in secondary classrooms, improving teacher education programs and continuing research into problems revealed in the survey.

CHAPTER 1 -- INTRODUCTION

1.1 Learning Assessment in British Columbia

Goals and Rationale

The Learning Assessment Branch of the B.C. Ministry of Education, beginning in 1974, has developed plans to conduct periodically a review of student performance and instructional practices in a number of curriculum areas. The purpose of these assessments is to provide those who make decisions about curriculum and curriculum-related matters with data upon which to base such decisions. Allocation of resources, revision of curricula, reshaping of teacher training programs, are but a few -- though major -- examples of the kind of decisions which cannot be made adequately without an objective data base, but which are made daily by teachers, superintendents, directors of instruction, school boards, and university faculty.

The most compelling argument for a continuous and systematic program of assessment is the fact that such an effort alone can produce longitudinal information which will allow the public, educational professionals and government officials to answer the important and deceptively simple question: How well are the educational programs in our schools meeting the needs of our children? Piecemeal testing, reliance upon information resulting from incidental district evaluations, ad hoc research, are simply not capable of telling us what we really want to know: Are we meeting the purposes or goals of our instructional programs for all children as these purposes change?

Procedures

Each specific assessment program in each of the curriculum areas under study starts with an effort to identify instructional goals for the curriculum area assessed and with an effort to derive from those the learning outcomes or objectives which form the basis of the assessment of student performance. The instructional goals statement also forms the basis for collecting information from teachers and school administrators regarding instructional practices in the curriculum area assessed.

The second step is the development and piloting of the instruments needed to collect the data of interest. These are a) a test, used to measure student performance, along with a questionnaire asking for information descriptive of the student and b) a teacher questionnaire eliciting information about instructional practices. This step involves the trying out of items and the review of the materials by various panels of teachers, teacher educators and members of the lay public at a number of centres. In a following section this procedure will be discussed in more detail as it applies to the results of the Reading Assessment discussed in this report.

Next, the data are collected in a province-wide simultaneous or near-simultaneous administration of the instruments to students and public school personnel. In most cases the entire provincial population of a specific grade is the target of this data collection.

Finally, the data are summarized and interpreted. Unlike physical measurements, educational measurements are seldom absolute in any technical sense of the word. Scores in numerical form mostly are only meaningful when used in some kind of comparison or when interpreted against some kind of standard. Customarily, a particular student's performance is compared with other students' work. Thus, we are accustomed to seeing statements that Josephine scored better than 58% of all students who took the test. The emphasis in the Learning Assessment Program is slightly different. Here, two questions are of prime importance: What have our students learned? (Can they cope with the real world?) and, second: How do they compare with students four or eight years ago? (Are we holding our standards?) This emphasis on the total program calls for different and somewhat new procedures in the evaluation of the test results. The procedures followed in the Reading Assessment are discussed in detail in Chapter 2.

Outcomes

The outcomes of the assessment of a specific curriculum area are of both a tangible and an intangible nature. Most concretely, there are a number of reports detailing the test and questionnaire results. Those reports deal with the data at the provincial as well as at the district level. More subtly, the outcomes of the assessments increase the professional awareness of student abilities and professional practices.

1.2 The Assessment of Reading Performance, Grades 8 and 12

Adequate reading skills are commonly thought to be among the most important outcomes of a child's schooling. Parents, teachers and school board officials recognize the central role of reading in the preparation of a young person for his role as a responsible citizen.

The primary purpose of the Reading Assessment is to determine to what extent school-age adolescents in British Columbia have acquired those basic reading skills which are developed in the school's reading program. It is important to stress basic. The assessment is founded on the assumption that it is possible to define (examples of) reading skills which are important for functioning in today's society. The intent is not to determine how far some small segment of the children tested has progressed, but rather to find out to what degree these basic reading skills have been mastered by all the population tested. This orientation, incidentally, largely determines the procedures used in constructing the tests and for the distribution of scores to be expected.

The Learning Assessment Branch of the Ministry of Education contracted a team from the University of Victoria to design and develop the instruments used and to report the results. This contract team was assisted by a Management Team, which functioned in a general advisory capacity. Both teams were comprised of educators from the public schools and the university community. A school trustee was also a member of the Management Committee.

The assessment proceeded through the following phases:

The identification of a statement of Reading Goals and objectives to be derived from those goals.

The development of a questionnaire to obtain relevant student background data.

The development of a teacher questionnaire to obtain information on the teaching of reading in the secondary schools in B.C.

The development of a test for both Grades 8 and 12 to measure performance on the objectives defined.

The collection of the data.

The application of interpretation procedures.

The analysis and interpretation of the results.

The remainder of this report deals in detail with phases described above.

CHAPTER 2 -- Development of Instruments and Test Administration

2.1 Objectives for Reading Instruction in the Secondary Schools

The underlying philosophy of the Learning Assessment Program required the formulation of a set of minimum instructional objectives for reading education. The emphasis was on determining basic measureable literacy skills of importance to 8th and 12th Grade students, respectively.

In preparation for the current reading assessment, one phase of the Language: B.C. Study conducted in 1976 involved asking teachers to evaluate tentative statements of instructional objectives. The data from this study were used to generate a set of objectives which represents the expectations and judgements of British Columbia's teachers and which agrees with the current professional literature on the topic.

The objectives are grouped in three major areas or domains: the understanding of word meanings, the comprehension of prose, and the application of reading skills to "every-day" reading materials.

Figure 1 shows the entire set of objectives which formed the basis both for the assessment of student performance and for the survey of instructional practices.

Figure 1 reflects a very common division of reading skills: vocabulary, comprehension and reading/study skills. In arriving at the objectives listed in Figure 1, one important consideration was the question: What do the students need to be able to do in Reading in order to function effectively after they leave elementary school and after they complete secondary school?

The skills tested here are believed to be of general importance for functioning as a citizen. The types of materials used are thought to be representative of other kinds of "real world" reading, but they are by no means exhaustive.

In the Fall of 1976 panels of teachers, school administrators and interested lay public reviewed the tentative list of objectives and prototype test items. Review meetings were held in Castlegar, Prince George, West Vancouver and Victoria.

Comments by panel members subsequently led to a final revision of the set of instructional objectives.

FIGURE 1

B.C. Reading Assessment

Instructional Goals - Grades 8 and 12

Objective	Domain 1 - Identify the Meaning of Specific Words
1.1	Structural Analysis: Use specific structural elements to help identify word meaning.
1.2	Context: Identify the meaning of a word by using the meaning of surrounding words.
1.3	Synonymy: Identify the meaning of a word by choosing the appropriate synonym.
	Domain 2 - Comprehension of Prose
2.1	Literal Comprehension: Identify or remember elements in the material read.
2.2	Interpretive Comprehension: Paraphrase, infer, relate, or generalize from elements in the material read.
	Domain 3 - Applied Reading and Study Skills
3.1	Application Forms: Follow directions in completing an application form.
3.2	Dictionary: Find appropriate word meanings and information on word origins.
3.3	Advertisements: Identify integral information in classified advertisements.
3.4	Advertisements: Identify integral information in descriptive advertisements.
3.5	Newspapers and Periodicals: Comprehend journalistic prose.

2.2 Student Background Data

The Learning Assessment Program, by its very nature, is a surveying of what is: a determination of what skills students have or do not have, of which instructional practices schools and teachers engage in or do not engage in.

It is natural for someone who studies the results of all the testing done to ask questions such as: Does the sex of a student affect performance? Does parental occupation? Do television watching habits influence a student's reading ability? The B.C. Reading Assessment, Grades 8 and 12, obtained information relative to these and similar questions. An attempt was made to isolate those variables which are most likely associated with success or failure in reading. The scope of this assessment, however, is limited to describing the association of those variables to performance. The question, "Does sex of a student affect (in a causal sense) his or her performance?", is not answered. The question, "Are there differences between the performance of boys and girls?", is answered.

Similarly, it is outside the scope of this survey to determine whether television watching affects reading performance and how it may affect this performance. Within the scope of this study is the answer to the slightly different question, "Do children who watch much television perform better or worse than those who watch little?"

The student questionnaire asked for information on the following variables:

1. Age
2. Sex
3. Number of schools attended since Grade 1
4. Born in Canada or elsewhere
5. Number of years of residence in Canada
6. Language before Grade 1
7. Dominant language at home
8. Hours of television watching per day
9. Frequency of newspaper reading
10. Frequency of magazine reading
11. Frequency of reading books
12. Father's or guardian's occupation*
13. Mother's or guardian's occupation*
14. Post secondary plans*

(* Grade 12 only)

2.3 Instructional Practices

Historically, the teaching of reading skills at the secondary level has not been considered a high instructional priority. It was generally assumed that when a child left elementary school and chose to further pursue academic studies, that is, go on to high school, he could read well enough to do so. If, on the other hand, he chose to drop out of formal education at the earliest possible moment, an eventual lack of reading skills at the end of elementary schooling was of no particular concern.

Changing social and professional requirements in contemporary society have thoroughly altered the demands made upon the reading skills of all children. Secondary schools have begun to make both remedial and developmental reading their business.

It is part of the purpose of the B.C. Reading Assessment, Grades 8 and 12, to provide educators of the province with a picture of instructional practices at the secondary level as they relate to reading. Who teaches reading in secondary schools? How well are reading teachers prepared at that level? What kinds of programs are followed? Those are the kinds of questions of interest.

In addition to the data resulting from the questionnaire administered to a sample of teachers during the data collection phase of the Secondary Reading Assessment, two other sources of information were available to complete the picture on instructional practices: a) the report of Language:B.C. on instructional practices and b) a study by Kinzer (1976) surveying the Reading programs in British Columbia Secondary Schools.* The availability of so much recent information influenced the extensiveness of the questionnaire to be constructed for the gathering of additional data on instructional practices. The final version of the instrument, the result of a number of revisions, requested information in the following categories:

a. Background and General Information

b. Attitude toward Reading as a secondary school subject

c. Goals and Instructional Practices

The results of this questionnaire survey are reported in Chapter 4, supplemented by information on instructional practices in the teaching of reading in British Columbia's secondary schools.

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* Mr. Kinzer kindly made the results of his study available to the Ministry for use in the overall compilation of data on instructional practices.

2.4 Assessing Student Reading Performance -- Test Development

New tests were developed for B.C. Reading Assessment, Grades 8 and 12, for the following reasons:

- There is no one commercial test available covering the set of objectives selected.
- Commercial tests which measure reading skills at a level as global as that defined for the purpose of the Reading Assessment tend to be norm-referenced tests. This has artificial consequences for item difficulties, inappropriate for the purpose of the Learning Assessment program.[1]
- Provincial development of the tests ensures proper coverage of local content, both in terms of the inclusion of Canadian content and in terms of the British Columbia secondary curriculum.[2]
- As stated in section 1.1, the Learning Assessment Program seeks longitudinal information. Control of test content throughout a period of time is a prerequisite for the gathering of such information.[3]

Test Development -- General Procedures

Figure 1 defines the 3 Domains and 10 Objectives for which test items needed to be developed. The tests for Grades 8 and 12 were to be identical with the exception of items for Domain 2, Comprehension of Prose.

After prototype items had been generated, Objectives and item types were reviewed by panels of teachers and lay persons (see section 2.1). Subsequently, an item pool approximately twice as large as needed for the final tests was generated. Items were then piloted on samples of 400 eighth and twelfth grade students. The item statistics generated, and the student and teacher comments, were used to select items for the final versions of the tests.

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1 See section 3.4

2 See section 2.4

3 See section 2.4

In the criterion-referenced approach to test development, wherein items are selected primarily on the basis of these reviews by specialists and members of the public, the primary consideration is whether or not each proposed test item will tap an important aspect of basic skills or knowledge.

This approach to test construction should not be confused with standard norm-referenced tests which are designed so that each test item, on the average, will be correctly answered by one-half of the student population. In criterion-referenced tests, it is entirely possible, and in many cases desirable, that the entire student population would correctly answer a given test item. Whether an item was included on the final version of the test, or not, depended upon its being deemed a valid assessment of an essential or basic skill for the grade level involved.

Test Development -- Specific Procedures

In this section a number of comments regarding specific test components will be made.

The structural analysis objective is in a sense a more limited and specific objective than any of the others. It was included because of strong support of the teachers on the item review panels. The requirement that items be machine scorable forced the measurement of this skill into a somewhat artificial format.

Objectives 1.2 (Semantics - Context Clues) and 1.3 (Semantics - Synonyms) were measured using test words drawn from specified sets of words. Both sources identify words actually used in B.C. Secondary School materials such as text books, and give information about the relative frequency of these words. The items for these two objectives are built so that the test word has a lower frequency than the distractors in an attempt to ensure that distractors (the other options in the question) in vocabulary tests would be easier than the word tested.

The measurement of the Objectives in Domain 2, Comprehension, posed a special problem. Often when comprehension tests are first developed, it is possible to answer questions without reading the story upon which the items are based. In order to ensure dependency of the item upon the passage, the items in this Domain were pilot tested using test forms containing only the questions and not the stories. The resulting information was used for revision or deletion of items.

In Domain 3, the selection of the actual materials to be read was of particular importance. An attempt was made to strike a balance between the type of print materials which might be familiar (such as newspaper articles, descriptive advertisements) and those which, although possibly unfamiliar, call for the application of very basic reading skills (such as the application form and the apartment rent advertisement).

In order to make possible a comparison of the reading abilities of 8th Graders and 4th Graders , the Grade 8 test included a five-item comprehension section and a four-item dictionary skills section both of which were originally administered to Grade/Year 4 students in Language: B.C. (1976).

Finally, all items include as a possible answer the "I don't know" option. The purpose of this option is to minimize guessing and to provide a legitimate option for those who do not, in fact, know the answer.

2.5 Collecting the Data

In March, 1977, test booklets were sent to each district to be administered to all Grade 8 and 12 students. Testing took place in one sitting, as per local arrangement. Both 8th and 12th Grade students were given two hours to complete the test which included the collection of background information. The test administration was supervised by classroom teachers.

At the same time, the questionnaire data were obtained from a sample of teachers in three subject areas: English, Science, and Social Studies at both junior and senior secondary levels.

41,678 8th Grade tests were returned, consituting 90% of the total 8th Grade population of the province. 24,204 12th Grade students returned tests, or 79% of the population. Subsequently, various analyses were done to determine whether the non-returns represented a threat of bias to the data. As a result of this analysis, both the 8th and 12th Grade data are believed to be representative of the total population of 8th and 12th Graders, respectively.

A total of 1,409 teachers returned a completed questionnaire, or 83% of those who constituted the sample. This number is considered adequate for the purpose of the present survey.

Non-Response and Frivolous Response Data

For 1975-76, the most recent year for which such figures are available, the absenteeism rate for senior secondary schools in the province was calculated to be approximately 10%. In spite of the fact that many observers believe this figure to be a conservative estimate of the true rate of absenteeism, the facts remain that a sizable proportion of Grade 12 students were not present for the test and that the proportion of non-respondents exceeds the normal absenteeism rate.

The National Assessment of Education Progress (NAEP) program in the U.S.A. has encountered similar difficulties of non-participation. In their first analyses, they assumed that the non-response group was similar in composition to the whole population and that those individuals' failure to participate would not affect the overall item results in any way. Subsequent studies have shown that the non-response group is not exactly similar in composition to the response group and that failure to take the non-response group into account in interpreting the assessment data could result in artificially high success rates being reported on items and objectives. NAEP has stated

that the extent of this inflation, however, is almost certainly not great enough to affect decision-making. For example, a success rate of 67% achieved by those responding to the test might represent a true success rate of 64% for the entire population.

The non-response problem was also studied for its impact upon the B.C. Mathematics and Reading Assessments. As part of the background information questionnaire on both instruments, students were asked to supply their date of birth, sex, number of schools attended, and school code number. On this basis, 63% of the completed mathematics tests at the grade/year 12 level were uniquely matched with completed reading tests.

The results obtained on the reading test by those students who had completed both the reading and the mathematics tests were compared to results obtained by those who completed only the reading test. This examination showed that the latter group, when eliminated from the analysis, altered the success rate by an average of less than one percent on an item. If we assume that the group who did not write the reading test is similar to the group who wrote only the reading test (and not the mathematics test), then this information tells us that the assessment results have not been unduly affected by the failure of the non-response group to complete the Reading Assessment instrument.

Another matter which was cause for some concern at this level was that of students responding frivolously on the test. It was felt by some that since individual students were not to be identified and since individual student scores were not to be reported, some students would make a mockery of the test and either select answers at random, guess, or in some other way respond frivolously to the items on the test. Two measures were undertaken in an effort to gauge the extent of such behaviour.

Each of the completed mark-sense cards was hand checked for completeness and for obvious patterns of frivolous response, such as the constant use of a single response category or the repetition of a series of responses: ABC ABC ABC .... Thirty-two such instances (0.1% of the total) were found. Second, a computer analysis was undertaken to identify those students who had, in all likelihood, responded by guessing or by selecting answers at random. Since each item had five foils, all those students who had fewer than 20% of the items correct were deemed to have responded frivolously. In all, relatively few such cases were found.

In summary, the best data available at this time lead to the conclusion that, despite the fact that a sizable proportion of the Grade 12 population failed to take the Reading Assessment test, the overall results obtained are an accurate representation of the total population. Moreover, analysis of individual students' response patterns has failed to turn up any evidence of widespread lack of due care and attention in completing the test.

CHAPTER 3 - TEST RESULTS

3.1 A Summary of Results

Stated briefly, the verdict is that the 8th Grade students performed satisfactorily on most of the skills and that the same is true for the 12th Graders, with the exception that both, but the latter in particular, showed performance that was less than satisfactory in an important area - the application of reading skills to "every-day" materials such as application forms, newspaper prose and descriptive advertisements.

The purpose of this chapter is to present the data upon which this judgement is based, the procedures by which it was arrived at and the interpretation placed upon it.

3.2 The Basic Data

The students' tests were scored by B.C. Research Council. Detailed data are reported in Report 1 Test Results (See Appendix A for table of contents). Those who wish yet additional information for purposes of further analysis should consult with the Learning Assessment Branch of the Ministry of Education.

Table 1 summarizes the basic data for both grades, per Domain and Objective.

Table 1 invites some comment. The percentages per se have essentially no meaning as an expression of how well the students did. They can only be interpreted by actually inspecting the items to which the students needed to respond. How good is 73% in structural analysis? That all depends, of course, on how difficult the task was. How well do the children comprehend a passage when they average 64% of the literal questions right? Again, it can be good (if relatively difficult questions were asked) or poor (if the questions were relatively easy). The items written for the passages and other material used in this test were by no means the only possible items. Others could have been generated. Would other items have produced other percentages? That is very likely, indeed.

TABLE 1

Mean Percent Correct[1]

Domain/Objective	Grade 8	Grade 12
Domain 1[2]	62	82[3]
1.1 Structural Analysis	73	85
1.2 Context Clues	64	82
1.3 Synonymy	49	80
Domain 2	60	69
2.1 Literal Comprehension	64	73
2.2 Interpretive Comprehension	56	66
Domain 3	62	81
3.1 Application Forms	70	81
3.2 Dictionary	62	77
3.3 Classified Advertisements	72	90
3.4 Descriptive Advertisements	48	73
3.5 Newspapers and periodicals	61	86

note: Gr. 12 had different test items for Domain 2 only

[1] The average percentage of correct responses to the set of items (e.g. the value "62" under "Grade 8" and opposite "Domain 1" above indicates that of all the responses to the set of items measuring Domain 1 for Grade 8, 62% were correct. Similarly the value "73" under "Grade 8" indicates that of all responses to the set of items measuring Objective 1.1 for Grade 8, 73% were correct.)

[2] The reliability coefficients for Domains 1, 2 and 3 for Grade 8, respectively, are .88, .77 and .85; for Grade 12 these values are .88, .80 and .82.

[3] Comparisons among objectives on the basis of these data are meaningless. See discussion that follows.

These and associated interpretation problems necessitated the use of one of a number of alternative interpretation procedures. The approach used by the Learning Assessment Branch for the interpretation of both the Mathematics and the Reading Assessment results is described later in this chapter.

In the meantime, one comparison, at least in part, which the data in Table 1 does allow, is the contrast between the Grade 8 and the Grade 12 performance.

Without knowing how well each grade did, it is clear that Grade 12 outperformed Grade 8 in every respect. (Domain 2 must be left out of consideration since different sets of items were used.) This result is not surprising, but neither totally without meaning. In section 3.3, for instance, a different picture emerges when some Grade 8 results are compared with those of Grade 4. Again, an evaluation of how much better the older students did is not very straightforward, but it appears that the difference both in Domain 1 and Domain 3 are sizable. To what extent the advantage of the 12th Graders resulted from fewer less capable students in that population or from generally greater knowledge and ability, is open to conjecture.

In subsequent sections the differences between the two groups of students will receive further comment.

3.3 The Results Interpreted

For the purpose of interpreting the data from the Reading Assessment, two Interpretation Panels, one for each grade, were established. (See Appendix E for membership.) In June, 1977, the 15-member Interpretation Panel, consisting of teachers, trustees, lay persons, supervisors and teacher educators, met for two days in Vancouver. The following steps briefly describe the procedure followed.

a) Prior to the meeting each panel member answered the test items as a student would and subsequently established, in terms of percent of students answering correctly, two levels of performance for each item -- "acceptable" and "desirable". Instructions to the panel asked the members to consider, in arriving at their performance levels, the range of individual differences among students, the variation in instructional goals and practices throughout the province, and the relative difficulty of the item.

b) At the meeting, the panel members reviewed the percentage of students who answered each item correctly. They proceeded to rate performance on each item as Strength, Very Satisfactory, Satisfactory, Marginally Satisfactory, or Weakness, using their pre-established range as a general focus of consideration rather than as a specific range. The instructions to the panel members emphasized that the criteria of satisfaction were unique to them as individuals and should reflect what each considered student performance on a particular item should be.

c) Pairs of individuals and then the Panel as a whole considered the ratings to the point of agreeing on final ratings for each item. Where strong discrepancies existed, a final decision was reached by vote. (Strong minority views were recorded for use in reporting.)

d) As a final step, the panel, divided into three groups, provided anecdotal comments for each domain of the test. In these comments, attempts were made to identify strengths or deficiencies in student performance for the Objectives and Domains in the test.

It should be emphasized that the process was not a mechanical averaging of fifteen individual evaluations. In many cases panel members were persuaded by the logic of their peers, or by additional information, to revise their original interpretation of the performance of a particular item.

This particular report focuses on the interpretation of the results by Objective and Domain. This involves taking into account the panel ratings for each item, and once more, by necessity, a sort of averaging or generalizing which tends to obscure extreme ratings. In Report 1, Test Results, ratings for specific items are reported.

Table 2 provides the outcomes for the Grade 8 and Grade 12 populations in terms of the panel's ratings for the test items.

TABLE 2

1977 PROVINCIAL READING ASSESSMENT
RATINGS OF GRADE EIGHT AND TWELVE RESULTS

	Performance Rating Grade 8	Grade 12
DOMAIN I - WORD MEANING IDENTIFICATION		
Objective		
Structural Analysis: Use specific structural elements to help identify word meaning	VS	S
Context: Identify the meaning of a word by using the words around it	S to VS	S to VS
Synonymy: Identify the meaning of a word by choosing the appropriate synonym	MS to S	S
DOMAIN 2 - COMPREHENSION		
Objective		
Literal Comprehension: Identify or remember elements in material read	S	S
Interpretive Comprehension: Paraphrase, infer, relate or generalize from elements in the material read	S	S
DOMAIN 3 - APPLIED READING AND STUDY SKILLS		
Objective		
Application Forms: Follow Directions in completing an application form	S	MS
Dictionary: Find appropriate word meanings and information on word origins	S	S
Advertisements: Identify integral information in classified advertisements	S	VS
Advertisements: Identify integral information in descriptive advertisements	MS	MS
Newspapers and Periodicals: Comprehend journalistic prose	MS	MS

Key to Rating:
St = Strength VS = Very satisfactory S = Satisfactory
MS = Marginally satisfactory W = weakness

Domain 1 - Word Meaning Identification

Grade 8

In the area of word meaning identification (Domain 1) the overall performance was considered satisfactory. Strength was seen in students' ability with structural analysis - Objective 1 - (combining word elements to provide the appropriate meaning in context, such as in the item, "If the candles go out, we have plenty of matches to re + light them"). It was assumed that knowledge of affixes, and familiarity with the way affixes modify the meaning of the root word, would result in higher performance on this portion of the test. Most reading programs for secondary schools pay some attemtion to this and related skills, and 85% of the junior secondary school teachers indicated in the instructional practices survey that they include at least "sometimes" activities related to this skill in their instruction; 36% actually indicated that they do this "often" or "always". It would be expected, therefore, that student performance in this area would be at least Satisfactory.

Objective 2, the use of context clues to arrive at word meaning, is an important skill used by all readers to identify word meanings. The test contained items such as the following, item 66, for this skill:

Although we are siblings, brother
(66)
and sister, we are not alike at all.

66. A) young in age
B) similar in some way
C) related to one another
*D) children of same parents
E) I don't know

The interpretation panel felt that an average of 64% of the students answering each item in this sub test correctly constitutes "Satisfactory" to "Very Satisfactory" performance. They considered a number of items fairly difficult for the grade.

Some signs of weakness in Objective 3 - selecting the appropriate synonyms for words - were noted: for instance, "merchandise - articles".

Though it is true that words seldom occur outside some sentence context, in many cases the context clues to the meaning of a particular word are minimal and understanding is dependent on a fairly strong sense of the meaning of the words used. In addition, this skill has traditionally been observed to be a fairly good measure of general verbal ability, as seen in its use as a test of verbal intelligence, such as the Peabody Vocabulary Test. For this reason in particular, the "Satisfactory" to "Marginally Satisfactory" rating by the interpretation panel should arouse some concern. Size of vocabulary tends to be related to amount and kind of reading and other language activities performed. This concern is heightened by the fact that the words in this subtest, as well as in the preceding one, were drawn from a list of words derived from reading materials frequently used in secondary school.

The panel felt that while the overall rating in word meaning identification was satisfactory (that students understood the meanings of word parts, words in context, and words in isolation for example), a higher level of performance should be expected and more instructional emphasis should be given to skills in this domain. Direct instruction in vocabulary by means of memorizing word definitions has proven to be a relatively ineffective technique; the needed improvement in this skill can be expected from more frequent and wider reading and from a continuous attention of the teacher to word meanings and the potential difficulties of words.

Grade 12

As with Grade 8, performance in Domain 1 was regarded as satisfactory. Objective 1.1 was rated "Satisfactory" to "Very Satisfactory" on the basis that the task for these students was so easy that performance in excess of 95% should be expected.

On Objective 1.2, Context Clues, the Grade 12 students' performance was "Satisfactory" to "Very Satisfactory", according to the Interpretation Panel. Indeed, on this subtest, for 6 out of 10 of the items at least 90% of the students answered each one correctly. The overall performance was depressed considerably by the fact that 58% of the students failed to identify the synonymy of perceive and discern in the context presented.

Performance on Objective 1.3 - synonymy - was also rated "Satisfactory" by the Grade 12 panel. Considering that a rating of only "Satisfactory" was assigned to a test containing words from secondary school texts suggest some concern for these results.

Overall, as in Grade 8, performance was seen as satisfactory, with, however, some concern also being noted for the size of the vocabulary as measured in Objective 1.3.

Domain 2 - Comprehension

Grade 8

The Interpretation Panel rated the performance of the Grade 8 students on both Objective 2.1 (Literal Comprehension) and on Objective 2.2 (Interpretive Comprehension) as "Satisfactory". The students read two passages, one an expository report about Australian Cities, quite like a passage they might encounter in a Social Studies text, and the other a narrative selection. Both passages were taken from texts recommended for use in British Columbia at that grade and were, therefore, considered representative of the readability level confronted by Grade 8 students.

Performance on Objective 2.2 items was rated as "Satisfactory" even though the mean percent correct was only 56%, suggesting that the panelists perceived the reading comprehension test to be relatively difficult.

In the area of literal comprehension, the panel indicated that students needed more experience in reading expository prose. In specific skill areas both scanning and knowledge of time sequence (flash back) appeared to require more attention. On question 68 of the test, only 39% of students correctly answered the item

Example (Flash back)

68. Which one of the following is true?

*A) The time sequence in the story involves a flashback.
B) Events are presented in the order that they would occur in real life.
C) The story is told entirely in the present tense.
D) The author does not provide enough information about the time sequence for the reader to make a judgement.
E) I don't know.

Similarly, in interpretive comprehension, the integrating of map reading skills with textual information, in particular, was considered to need greater teaching emphasis. Here, 56% of the students correctly answered item 26 which required the ability to utilize information contained in the map's legend and in the written passage.

Example (Map reading skills)

26. What is the largest state capital in Australia?

A) Brisbane
*B) Sydney
C) Perth
D) Melbourne
E) I don't know

Grade 12

The second Domain, as measured by the test, was considered to indicate satisfactory student performance in both literal (Objective 2.1) and interpretive (Objective 2.2) comprehension in the narrative as well as in the expository prose passages. The expository passage dealt with the cultivation of the sea and the narrative passage related a father's memories of his dead son.

However, the panel reported that "...since 30% of the responses were not correct, improved instruction in literal and interpretive comprehension is necessary". In addition, the panel pointed to the need for instruction in the ability to identify the main idea or the main purpose of a passage.

The following item, correctly answered by only 59% of the population, was presented after the expository passage on the sea.

25. What is the main purpose of the article?

A) To show the vast supply of food at hand in the sea
B) To reveal the exaggerations people have made about the sea as a food source
C) To tell how important oceanography is
*D) To bring to light the complexity of using the sea as a food source
E) I don't know

No attempt will be made to compare scores on literal and interpretive objectives since there is no assurance that the tasks were of equivalent difficulty. It is worthy of note, however, that even though interpretive comprehension is in terms of mental operations more difficult than literal comprehension, there can be no "higher order" comprehension without literal understanding. Literal comprehension, which is related to ability in vocabulary and word attack skills, can be treated more directly than interpretive comprehension, a more complex reasoning ability. Thus, the Grade 12 students' performance of only "Satisfactory" in literal comprehension reveals a need for direct and sequential teaching of these reading skills.

Domain 3 - Applied Reading and Study Skills

Grade 8

Domain 3, Application of Reading Skills, was considered the weakest of the Domains and in need of special emphasis and better instructional materials. Performance was considered barely satisfactory in three of the five Objectives: those dealing with completing application forms, using the dictionary, and reading classified advertisements to locate information. The reading of advertisements describing a product in terms of its features, and of newspaper articles describing events or incidents, was seen as only marginally satisfactory. In particular, the panel was concerned with students' lack of ability to read such materials critically and to interpret information objectively.

Objective 3.1 calls for a measure of the students' skill to read application forms. In the Secondary Reading Assessment tests, for Grades 8 and 12, five items relating to a job application form were included. The form indicated spaces where applicants should write their name, address, birthdate, social insurance number and the like. The Interpretation Panel rates a 70% average performance as "Satisfactory". Ratings from individual panel members varied little.

Objective 3.2 requires that students identify which dictionary definition of a particular word applies in view of the way that word was used in a sentence. Students were provided with standard dictionary definitions for words to be defined. Those words were presented in a sentence. Overall, the Interpretation Panel rated performance on this Objective "Satisfactory", noting that though students are encouraged to use dictionary skills in school, little routine evaluation on a student's progress in this particular kind of discrimination is provided by most teachers.

In the test for Objective 3.3 the students were provided with a page of numbered Classified Advertisements in newspaper print. The mean percent correct for this Objective was 72%, and in the judgment of the Interpretation Panel that was good enough for a "Satisfactory" rating.

Objective 3.4 calls for the understanding of descriptive advertisements. In many ways this task resembles those for Objective 2.1 and 2.2, literal and interpretive understanding of prose. However, descriptive advertisements require an Objective and critical evaluation of statements made and an ability to separate facts from "half facts". For this reason the reading of this type of prose is measured separately.

In the Reading Assessment Grade 8 and 12 tests, the students were presented with a) an advertisement describing in detail the virtues of a pocket calculator and b) a consumer report style evaluation of the pocket calculator. Questions such as the following were then asked:

Which of the following statements from the advertisement is an opinion?

The Cheque Mate *
A) makes all other calculators obsolete
B) automatically inserts two decimal places
C) costs $39.95 plus postage
D) is available from P.A.&P. sales.
E) I don't know

This item was among the easier ones for the students - 57% of the students answered it correctly against an average of 48% for the 10-item set measuring Objective 3.4. The Interpretation Panel rated the performance of the 8th Graders as "Marginally Satisfactory", expressing in their comments a sense of disappointment that the students did not do better on this vital Objective.

Finally, Objective 3.5 calls for the measurement of understanding of journalistic prose. It was measured by five questions based on a short, approximately 300-word long newspaper story entitled "Crash Victim -- No Survival Gear". The questions measured predominantly literal comprehension.

Again, the performance of the Grade 8 students was rated "Marginally Satisfactory". The panel felt that the questions were straightforward and the newspaper story a typical example of reporting. Accordingly, their expectations exceeded the average performance of 62% turned in by the students.

Grade 12

Domain 3 was considered to be generally satisfactory in spite of marginally satisfactory performance on three Objectives. Though the average percentage of correct answers to items within each Objective was in the 70-80% range, the panel felt that the tasks were so fundamental and easy that higher expectations were warranted.

The Grade 12 students' ability to complete application forms, to read objectively slanted or misleading advertising, and to scan newspaper items for details was considered to be capable of improvement and in need of more attention in the instructional program. The abilities to use the dictionary and to read classified advertisements were seen as being well developed.

Sample Test Items (Grade 12)

No. 84 deals with an airline mentioned in a newspaper article.
(Understanding events or incidents in newspapers)

84. What is Calm Air?		% of students[1]
A)	a small town in the north of Canada	2
B)	a company in the North West Territoies	8
C)	the weather message from Rankin Inlet	4
*D)	an airline in Manitoba	84
E)	I don't know	1

No.87 refers to a calculator being sold through an advertisement.
(Reading advertisements critically)

87. What are you being urged to buy?		% of students
A)	a brainy cheque book	12
B)	a personal banking system	3
C)	a bank account	1
*D)	a calculator	82
E)	I don't know	0

No. 89 refers to claims made in an advertisement.
(Reading advertisements critically)

89. Which one of the following is specifically stated in the advertisement?		
A)	The CHEQUE MATE is available at your local bank	7
B)	You will never make another banking error	24
C)	The calculator will fit easily into every purse or pocket	33
*D)	The CHEQUE MATE weighs half a kilogram	31
E)	I don't know	4

In section 3.3 of this report, indications are given that these results should not be regarded as totally surprising. The curriculum in both the junior and senior secondary schools does not emphasize basic, or perhaps functional, reading skills. The fact that only 40% of the junior secondary teachers of English reported that they pay attention to this kind of skill "often" or "always" suggests that there is a relative lack of emphasis on development of certain functional reading skills.

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[1] As the percentage of students responding to each of the five answer choices has been rounded off to the nearest whole number, the total for the question may not equal 100%.

3.4 Comparison of Grade 8 and Grade 12

The test for the two levels was the same in all respects except for the reading passages in Domain 2 which were more difficult in the Grade 12 test booklet.

Overall, Grade 8 students were considered to be able to use satisfactorily the word meaning identification skills measured in the test and to understand acceptably the prose selections they read. However, in applying reading skills to functional or out-of-school tasks such as reading advertisements, considerable improvement was seen to be possible and necessary.

Generally, Grade 12 students showed a satisfactory ability to identify word meaning and to comprehend prose materials. Of the three Domains, the application of skills was the one considered to be most in need of attention.

The results of the test showed the same profile for both groups in their scores (P-values)[1] and in the panel's interpretations of these scores.[2] In both groups, mean percent correct was higher for the word meaning and application domains and lower for the comprehension domains but performance was judged somewhat less than satisfactory for the application domain. These results suggest the following conclusions:

- Grade 12 students have mastered reading skills well beyond the level of Grade 8 students.
- Reading skills associated with school-type reading activities (word meaning identification and comprehension of prose materials) have been mastered more fully by both groups than have the skills to be applied to out-of-school activities (newspaper articles, descriptive advertisements). Since functional reading skills appear weakest at these levels, all teachers should place greater emphasis on the development of these skills.

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[1] See P.26 for discussion of "P-value".

[2] The panels cautioned, however, that while, on the whole, they were satisfied with provincial reading scores, the results do not mean that every student is performing at an acceptable level. Also, the rating of "Satisfactory" is only midway on the rating scale of five performance levels, with two levels above and two below. Thus, considerable improvement in performance was seen to be possible and desirable.

3.5 Comparison of Grade/Year 4 and Grade 8

Table 3 summarizes the results of performance on items common to the Grade/Year 4 (1976 assessment) and the Grade 8 test.

TABLE 3

COMPARISON OF PERFORMANCE LEVELS GRADE/YEAR 4 AND 8

Objective A - Comprehension

Item No.	P-value* Gr./Yr.4	P-value Gr. 8
97	72	73
98	83	82
99	45	63
100	52	66
101	48	55
Mean Percent Correct	60	68

Objective B - Dictionary Skills

Item No.	P-value Gr./Yr.4	P-value Gr. 8
102	89	78
103	39	46
104	42	77
105	76	77
Mean Percent Correct	62	70

* The percentage of pupils who responded correctly to each item, (e.g. the value "72" under Grade/Year 4 and opposite "Item No. 97" indicates that 72% of all Grade/Year 4 pupils responded correctly to Item No. 97. Similarly, 73% of all Grade 8 pupils responded correctly to the same item.

Table 3 shows the results of the two sets of items from the Grade/Year 4 reading test used in the 1976 Language:B.C. Survey and included on the 1977 Grade 8 test. This part of the assessment was conducted to determine whether there were differences in performance between Grade/Year 4 and Grade 8. In addition, because the results on the Grade/Year 4 Dictionary Objective were rated as weak, it was considered important to know whether there were differences in that area as well.

The mean performance of the Grade 8 students on the Comprehension test exceeded that of the Grade/Year 4 students by eight percentage points. While the difference is in the desired direction, it must be questioned as to whether the superiority of the Grade 8 students is large enough. It should be of some concern that the difference between the performance of two grades, four years apart, is only eight percentage points on these items. Inspection of performance on individual items must increase that concern. Item 97 asked, "What is this story about?" The percentage of Grade 8 students answering this question correctly exceeded that of the Grade/Year 4 students by only one percentage point. On Item 98 where the students were asked to identify what the author described about Helen Keller, the Grade/Year 4 students actually did better than the Grade 8 students. It is interesting to note that these two questions both deal with the main idea of the passage, an area of some concern to members of the Grade 8 panel (See Chapter 3, 3.3).

The difference in performance between Grade/Year 4 and Grade 8 on the Dictionary test was, again, only eight percentage points. Similarly, on one item the Grade 8 superiority was only one percentage point (Item 105) and on another (Item 102) the Grade/Year 4 performance exceeded that of the older students.

The data base in these comparisons is very small to make any firm conclusions. It must be remembered that it is based on responses to five questions related to a passage of about 170 words and four dictionary excercises. However, if performance on these test items is an accurate reflection of the change in reading ability from the beginning of Grade/Year 4 to the beginning of Grade 8, then the effectiveness of the reading instructional program in the intermediate grades must be called into question.

Several reasons may account for the lack of a greater difference in scores. The comparison items occurred at the end of the Grade 8 test booklet and the students may have been tired. The older students may not have taken the test seriously.[1] It is much too early to say what caused the relative lack of difference but the present data clearly indicate that it is worthwhile to launch a much more thorough comparison of reading performance from one grade to another.

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[1] However, the data analysis described in section 2.5 would tend to reject the frivolous response hypothesis.

3.6 A Program Evaluation

The findings presented above reveal a varied picture of the effectiveness of the instructional program in reading when viewed from the vantage point of representative grades in the junior and senior secondary schools of British Columbia. The overall judgement of panels of educators and lay persons shows satisfactory or acceptable levels of performance in the basic reading skills. Ability to identify or discover word meaning appears to be at a relatively high level compared with other skills measured.

In the area of comprehension of prose, (the skill most stressed perhaps in English classes) neither the Grade 8 nor the Grade 12 students show any pronounced weaknesses. Neither do they, however, show any pronounced strengths. In addition, less than satisfactory performance is displayed by the older students in two Objectives closely related to comprehension of prose: understanding descriptive advertising materials and understanding newspaper reports. The picture for the Grade 8 students is only slightly more encouraging in this respect. It should be borne in mind, however, that these are general results for the province as a whole and that in the averaging process that occurs in such reporting, the extremes in performance - both high and low - are camouflaged. Thus, there are as many students who do have strengths in the areas measured just as there are those who have deficiencies.

Generally, of most concern for both grades, but particularly for the 12th Grade students, is the performance in Domain 3, Applied Reading Skills. The data as interpreted indicate that higher scores on the tests of Domain 3 objectives could be expected. While these results are not alarming, they do definitely indicate the need for special attention in our Secondary School reading programs to the development of the ability by students to deal with a wide variety of every-day reading materials.

3.7 Student Background Variables and Reading Performance

Description of the data base and statement of limitations

Responses were received from some 42,000 Grade 8 students and 24,000 Grade 12 students to a questionnaire developed to assess the background variables described in Section 2.2 of this report. That section also provides a rationale for this component of the B.C. Reading Assessment Grades 8 and 12 survey.

As a whole, the data derived from these questionnaires form the largest extant body of information describing student population background variables as they relate to reading performance in B.C. and, to the best of our knowledge, in Canada.

The relationship of objective descriptors of the student population to reading performance

In Table 4 a summary of reading performance is presented in terms of age, sex, language background, time of residence in Canada and number of schools attended. In each case, only information for selected values of the variables is reported. Thus, though the students reported their age in one of seven category choices, in Table 4 only data for 13-year-olds (the modal or typical age of 8th graders) and for those older than 15 (the oldest group) have been reported.

Table 5 provides data on student personal habits, such as television watching and reading of books, and the relation of this information to reading performance.

The researchers emphasized that a perceived relationship between performance and a given characteristic does not imply cause and effect. For example, if results show that students who have attended a large number of schools score lower than those who attended fewer schools, these statistics do not mean that simply transferring from school to school causes student performance to be low. The lowered performance may be due to conditions other than the one being examined, or to some combination of related factors. Other possible explanations may include family and social conditions, language background and learning habits.

3.8 Grade 8

Age Many of the differences among various groups were to be expected. Scores according to age, for instance, indicated that in all areas of the test, younger (under 13) students generally out-performed the older (over 13). This result was identical to the findings of the Grade/Year 4 reading Assessment of 1976 and similar reasons were considered to explain it (i.e. the older students were the less capable ones and may have been held back in one or more grades).

TABLE 4

OBJECTIVE DESCRIPTORS OF STUDENTS' BACKGROUND AND READING PERFORMANCE (%) *

GRADES 8 AND 12 **

	Age				Sex			No. of Schools Attended				Born in Canada ?			English Usual Language at Home ?		
	Grade:	(8) %		(12) %		(8) %	(12) %		(8) %		(12) %		(8) %	(12) %		(8) %	(12) %
Domain 1	13	65	17	85	M	61	82	2	64	3	82	Yes	63	83	Yes	63	83
(62/82)***	>15	40	>18	70	F	63	83	>8	55	>8	81	No	60	77	No	55	75
Domain 2	13	63	17	75	M	59	68	2	62	3	69	Yes	61	71	Yes	61	71
(60/69)	>15	40	>18	70	F	62	71	>8	54	>8	69	No	59	65	No	55	66
Domain 3	13	66	17	85	M	60	80	2	65	3	82	Yes	64	83	Yes	63	82
(62/81)	>15	38	>18	70	F	65	83	>8	56	>	81	No	61	78	No	57	77

* Main entries are Mean Percent Correct.
For example, for the "Age" variable Mean Percent Correct for Grade 8, age 13. was 65% and for age over 15 it was 40%; Grade 12, age 17, it was 85%, and for over 18 it was 70%

** This is a summary of extensive data reported in Report 1.

*** Percentages for the Grade 8 and 12 population, respectively.

TABLE 5

DESCRIPTORS OF STUDENTS' HABITS AND READING PERFORMANCE (%)*

GRADES 8 AND 12 **

	Hours Television Daily			Read Newspaper ?			Read Magazines ?			No. of Books read		
		(8)	(12)		(8)	(12)		(8)	(12)		(8)	(12)
Domain 1		%	%		%	%		%	%		%	%
(62/82)***	1 hr.	66	84	daily	65	84	3,4 times per week	63	84	>1 per week	60	87
	>5 hr.	58	76	hardly ever	57	78	hardly ever	59	77	0-2 per yr.	53	76
Domain 2												
(60/69)	1 hr.	64	73	daily	63	72	3,4 times per week	60	73	>1 per week	68	78
	>5 hr.	54	61	hardly ever	54	64	hardly ever	56	62	0-2 per yr.	49	58
Domain 3	1 hr.	66	83	daily	66	83	3,4 times per week	62	83	>1 per week	70	83
	>5 hr.	57	76	hardly ever	56	78	hardly ever	59	77	0-2 per yr.	51	77

* Main entries are Mean Percent Correct.
For example, for the "Television" variable Mean Percent Correct for Grade 8 for 1 hour of viewing was 66% and for more than 5 hours it was 58%, while for Grade 12 for 1 hour it was 84% and for more than 5 hours it was 76%.

** This is a summary of extensive data reported in Report 1.

*** Percentages for the Grade 8 and 12 populations, respectively.

Sex Also, as in the earlier assessment, girls out-performed boys in all reading skills measured. From these results, it appeared that the superiority of girls over boys in reading performance found to exist in previous studies, such as that of the United States National Assessment of Educational Progress, continues until at least Grade 8.

Number of Schools Attended Student performance varied with an increase in the number of schools attended. While earlier studies such as Language: B.C. showed a consistent decrease in scores with an increase in number of schools attended, at the Grade 8 level highest performance in all Domains occurred where the students had attended only two schools since Grade 1. Students attending a single school, who formed a small minority, had considerably lower scores than the average for the total grade. These were probably small outlying schools with limited resources in reading instruction. Where more than 2 schools were attended since Grade 1, performance decreased consistently. Of the 41,678 students in the assessment, almost 50% have attended 4 or more schools, a statistic which suggests that relatively large numbers of Grade 8 children require special consideration because of mobility-related influences bearing upon them.

Place of Birth and Language Spoken Expected shifts in performance also accompanied changes in variables concerned with place of birth (Canadian/non-Canadian), length of residence in Canada and language spoken at home. As in the Grade/Year 4 reading assessment, students born in Canada and those who have lived longest in this country showed the highest performance, exceeding significantly in all cases the average performance in the province. Results by language spoken before Grade 1 showed considerably higher performance for English speaking students. Similar results occurred for those students for whom English was the language usually spoken in the home. Although other factors such as self-esteem and socio-economic variables associated with place of birth and use of English in the home may also affect reading performance, it does appear, as might be expected, that students most familiar with the English language and Canadian customs are the most proficient readers of English. These results do suggest, however, that those students who are new to Canada and its culture require special help and consideration.

Hours of Television Watched Interesting results also came from the data concerning the relationship between the hours of television watched and performance on the test. As in the Grade/Year 4 assessment, there was generally, up to a point, a higher level of performance in reading with a reported increase in television watched. For Grade 8 students, television viewing of up to about 1 hour per day was associated with increases in test scores. Beyond this point there was a slow decrease to the 4 hours per day category and then a fairly abrupt drop in performance in the last category, 5 or more hours per day. However, even in the 4 hour-per-day category, student performance was still equal to or higher than the average performance for the province, and 3 hours per day was equal to or higher than the No Television category.

The differences in test scores involved are sizable and connot be ignored. Moreover, of the 8th Grade children who do watch television (97% of the population), some 11% watch 1 hour or less, 45% watch at least four hours or more and about one fourth of the population watches 5 hours or more per day. Though the 12th graders spend less time in front of their sets, 60% watch 2 hours or more and nearly 20% view television for four or more hours. (The 5+ group is down to 7%.) It appears, therefore, that the lower performance associated with extreme television viewing habits affects a sizeable number of students.

The question to be answered, of course, regards the extent to which television causes shifts upward or downward in reading scores. This is a very complex question indeed. It is possible to argue, for instance, that children who are heavy T.V. watchers still wouldn't read if their T.V. sets were turned off; that indeed, for these children, T.V. provides a source of verbal stimulation to which they would not be exposed if they substituted three hours of loafing per day for three hours of T.V. Again, the argument might be made that extreme television watching is indicative of a certain parental attitude toward their children's education and that this attitude will have a negative effect on his scholastic motivation and achievement throughout the child's school career. The number of potential hypotheses is virtually unlimited. The data from this assessment and that from Language:B.C. have established, nevertheless, a link between academic achievement (performance in reading and the other language arts in these cases) and television watching habits. It is imperative, in light of the size of the differences involved, that that link be investigated in more detailed research efforts.

Newspaper and Magazine Reading Results by frequency of reading newspapers show a smooth and gradual increase in performance scores with an increase in amount of reading done. Highest performance was recorded in the category where students read the paper daily. These results were somewhat unlike those for a similar amount of magazine reading. For this latter variable performance increased abruptly from the "hardly ever" category to the "once a month" category, then slightly to the "once or twice a week" category where it peaked. Thereafter, in the "three or four times a week" category, performance declined to about the average for the province. Reading skill development, therefore, appears to be related to the amount and kind of out-of-school reading done, probably due to the practice effect of such reading. The downward shift in reading performance in the highest category for magazines suggests that the kind of magazines students read (possibly highly specialized or with limited scope for skill development) may have less consistent influence on reading skill development than do newspapers.

Number of books read The final variable considered in the Grade 8 assessment - number of books read - showed the expected increase in performance with an increase in the number of books read. A strong and steady increase in performance was noted with the highest performance found in those students who read more than 1 book per week. Interestingly, the number of students decreased with an increase in number of books read. These two sets of statistics suggest a need for greater encouragement and emphasis upon personal reading by more students.

3.9 Grade 12

Age, Sex, Place of Birth, Language, Reading of Newspapers and Books

The apparent relationship between the variables being considered and student performance at the Grade 12 level paralleled very closely the findings at the Grade 8 level.* In fact, of the eleven variables examined at the Grade 8 level, eight showed the same trend at Grade 12. As with the Grade 8 students, performance increased with decrease in age. Also, girls out-performed boys. Canadian born students and those who speak English in the home or spoke it before starting Grade 1 had higher scores than those born outside the country or those who speak another language at home. As in Grade 8, the more often students read the newspaper and the more books they read, the higher their performance. However, in relation to the number of books read, Grade 12 students showed somewhat irregular achievement patterns. In the simpler, more mechanical aspects of reading, such as word identification or filling out forms, incrased reading is not associated with as much improvement in performance as are the more complex behaviors such as comprehension and evaluation of prose materials.

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* The reader is reminded that cause and effect relationships cannot be assumed to be the only explanation for the relationship between the variable and student performance.

Hours of Television Watched Television watching in Grade 12 shows a somewhat more negative relationship with reading performance than is the case in Grade 8. The more television watched - beyond 1 hour per day - the lower the performance. The rate of decrease was greater than for Grade 8. However, here as in Grade 8, some television watching appears to be associated with better performance than instances in which there is no television watching at all, and since over 90% of the students in the sample watched television to some extent, investigation of the exact relationships in this area is essential.

The same reasons for the apparent relationships between variables and performance that were given for Grade 8 were considered to be appropriate for Grade 12.

Magazine Reading Unlike the relationships seen at the grade 8 level, there was at the Grade 12 level a consistent increase in reading performance with increase in frequency of magazine reading. Grade 8 students showed a ceiling effect at the "once or twice a week" category and declined in performance at the highest category. Apparently, then, Grade 12 students may read more broadly in magazines than do Grade 8 students so that the experience may aid in reading skill development.

Though it is difficult to evaluate what reading a magazine twice a week means in terms of time of exposure to print, (and we assume large variations from student to student) these variables again have a simple relationship with performance: the more the better. Table 5 shows, for instance, that in terms of extreme values of the variables, sizable differences exist in terms of test scores. Grade 8 students who seldom ever read a newspaper score some 8% below those who claim to do so daily. Differences for number of books read are even larger, in particular for the Comprehension Domain. Of course, comprehension stands to gain most from extensive reading, but in considering all these differences it must be kept in mind that those who read much probably do so because they like to read and they may like to read because they are good at it. The question of to what extent and for which children superior reading ability results in extensive reading as opposed to what extent much reading results in development of superior reading adults is not yet answered. A simple, one-way causal interpretation of the data in Table 5, relative to these three variables, however, is very likely incorrect. Here, as in Grade 8, outside reading should be encouraged.

Number of schools Attended Another area in which performance trends at Grade 12 differed from those at Grade 8 was in the area of student mobility. In Grade 8, the trend was generally for a decrease in performance with an increase in the number of schools attended. Grade 12 students showed very little change in performance. The differences which did appear were not considered to be educationally significant. As seen at the Grade 8 level, students who attended only one school since Grade 1 showed a generally lower level of performance than did students in other categories. A slight decrease in performance was seen for those students who had attended 8 or more schools. These results suggest that as students mature the negative effect of mobility decreases to the point of insignificance.

3.10 Grade 12 Variables

Several variables, unique to Grade 12 students, were related to reading performance. These were variables dealing with parental occupation and post secondary school plans.

Parental Occupation Father's occupation as related to reading performance showed a consistent pattern. Students whose parents might be considered more affluent or more highly educated generally showed a higher performance level on the test. The test results revealed the following order of student performance, from highest to lowest, expressed in terms of father's occupation: (1) professional - managerial, (2) sales - technical - transport, (3) clerical - skilled - farmer - semi-skilled - service, (4) unskilled - mining - logging - fishing - farm work. It should be pointed out, however, that the differences in performance, particularly among the first three groups, were very small, having no practical educational significance. When the mothers' occupation was related to performance, similar results occurred with the one interesting variation that students whose mothers were homemakers placed second in order of reading performance. The order of performance, from highest to lowest, was as follows: (1) professional - managerial, (2) homemaker, (3) sales - technical - transport, (4) clerical - skilled - farmer - semi-skilled - service, (5) unskilled. These results seem to reinforce the commonly held belief that children in advantaged homes (more highly educated and affluent parents) have a higher level of academic performance. However, since the differences in performance were small and the cause-effect relationships are not established, this area should be investigated further.

Post Secondary School Plans Performance in terms of post secondary school plans was not unexpected. Students with an academic, professional or technical orientation outperformed those who were undecided, or were seeking any job.

In all cases, the performance of university-bound students (21% of the population) exceeded the performance of students with other plans by 5% to 8%.

CHAPTER 4 - INSTRUCTIONAL PRACTICES IN READING IN BRITISH COLUMBIA'S SECONDARY SCHOOLS

4.1 Background and General Information

Reading programs in British Columbia's secondary schools appear to be limited both in kind and occurrence. The data obtained in the B.C. Reading Assessment, Grades 8 and 12, reveals that in 60% to 80% of secondary schools, specific reading instructional programs are limited to less than one third of the students they serve.

Kinzer (1976), who surveyed all British Columbia Secondary Schools and collected information regarding their reading programs, presents supporting evidence. Encouragingly,the administrators surveyed in the Kinzer study expect an increase in developmental and remedial reading instruction.

Since reading programs in the secondary school are a fairly new phenomenon relatively little emphasis seems to have been placed on training personnel for the task. In fact, the most frequent reason cited for absence of more reading instruction in the Kinzer study was, indeed, lack of adequately prepared personnel.

Whereas 75% of teachers surveyed in the present Reading Assessment agreed that remedial reading in the secondary school should be carried out by specially trained reading teachers, there was far less agreement as to who should be responsible for developmental reading. Less than half of the teachers believed that only specially trained reading teachers should carry this responsibility. Indeed, nearly 70% maintained that subject teachers should be teaching the reading skills necessary for each area and just about as many teachers felt that the teaching of reading can be incorporated into the teaching of their own discipline without interference with the main course objectives.

With regard to the question of teacher qualification, an impressively large number of the respondents to the Reading Assessment questionnaire have a professional certificate (99%) and, on the whole, they are an experienced group (close to 80% have worked four or more years as teachers)[1]. Their preparation for the teaching of reading, either by itself or within the context of a content course, however, is less extensive. Some 28% of the teachers report to have taken a full semester course in reading and approximately 15% took a remedial reading course. (These percentages may overlap considerably!)[2] In interpreting this information it must be borne in mind that two of the groups of respondents (English teachers and Social Studies teachers) tend to supply the staff with teachers who teach, at least part time, reading in secondary schools. In addition,two-thirds of these same respondents agree that it is necessary to have taken courses specializing in the teaching of reading in order to teach reading effectively.

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1 In these respects the sample of teachers closely matches the teachers surveyed for the Language: B.C. study (1976)

2 For Language:B.C. these percentages were repectively 23 and 13, in effect quite comparable.

4.2 Attitude Towards Reading

Successful implementation of a reading program in a secondary school so that it benefits all students who need reading instruction is very much dependent upon the cooperation of the entire staff of the school. Attitudes of all staff members towards the teaching of reading at the secondary level, therefore, are of prime importance.

Data from Language:B.C. (1976) suggests that the need for adequate instruction in reading has become generally more recognized. Respondents in that study ranked the development of reading skills first among 17 objectives of the English curriculum. The Kinzer (1976) study reinforces this conclusion. His study reports an absence of reading programs caused, to a large degree, by a lack of trained personnel. He does indicate, however, that since 1970 a strong increase in number of students served took place, as well as in instructional time, variety of offerings, and services.

The B.C. Reading Assessment, Grades 8 and 12 data also concludes that subject matter area specialists have become more cognizant of the importance of developing adequate reading skills in their students. In rating the importance of such reading objectives as comprehension, following directions, developing vocabulary, using study skills, Science teachers and Social Studies teachers are virtually indistinguishable from their English colleagues in their emphasis. Approximately 70% to 90% of the teachers rate each of these Objectives as "Important" or "Essential" (the two highest values on a 5-point scale). Moreover, content area specialists suggest that they alone are responsible for developing the reading skills unique to their area. Less than 20% of the respondents agree that the English teacher should be responsible for the teaching of those skills, in contrast with nearly 70% who want the content teacher to accept that responsibility.

As for the English teachers themselves, it appears that they recognize reading instruction as an important part of the English curriculum. Whereas only 48% of the English teachers believe that they are in the best position to teach reading (versus approximately 58% of the Science and Social Studies teachers who hold that belief), over 90% of the English teachers agree that the teaching of reading and study skills enhances the students' learning of English. Moreover, though literature tends to make up half or more of the time in most English classes (Language:B.C., 1976), some 60% of the English teachers among the respondents disagree with the statement that "teaching of reading along with literature detracts from the literary enjoyment students should derive".

4.3 Goals and Teaching Activities

Though an analysis of the respondents' beliefs about the teaching of reading shows a high concern for developing reading skills, examination of the information available on actual practices shows up some of the problems in meeting that concern. The same Language: B.C. 11th and 12th Grade teachers who rated development of reading skills among the prime objectives of instruction in English indicate that they give training and practice in reading skills only "Sometimes". Grade 8 teachers, who actually picked reading as the most important objective, indicate that they teach it "Often" or "Sometimes," giving it equal emphasis with instruction in speaking skills and formal grammar, but less emphasis than creative writing. These results suggest the gulf between the ideal world of goals and the real world of practice, where tradition, inadequate materials, training, and resources, as well as time constraints limit the realization of goals.

Similar though somewhat less pronounced conflicts between objectives and practices emerge in an analysis from the Reading Assessment data. Though 70% of the junior secondary school English teachers consider using structural analysis to understand words as an "Important" or "Essential" skill, nearly 65% report that they include activities relative to this skill only "Sometimes", "Rarely" or "Never". Again, the application of reading skills to different kinds of materials is considered "Important" by over 80% of all English teachers, and yet only 40% of the junior secondary school English teachers and 27% of their senior secondary school counterparts report that they include activities relative to this skill "Always" or "Often". These results point out the necessity for re-examining the allocation of time in English classrooms throughout the province.

The data from the Secondary Reading Assessment, Grades 8 and 12 indicate that the respondents gave the highest priority to instruction in vocabulary development, literal comprehension and inferential comprehension. Table 6 summarizes the information.

Again, those data must be interpreted with extreme caution. A teacher who during each English lesson asks one interpretive question of the class and a teacher who spends half of the class time on intensive instruction and practice of skills of inference, generalizing, contrasting, etc. would both be justified in answering that they "Always" include activities for this particular skill.

TABLE 6

PERCENTAGE OF RESPONDENTS REPLYING "OFTEN" OR "ALWAYS" WHEN ASKED HOW FREQUENTLY ACTIVITIES FOR SKILL WERE PROVIDED IN LESSON UNIT.

	English		Science		Social Studies	
	8 - 10	11 - 12	8 - 10	11 - 12	8 - 10	11 - 12
Reference Skills	52	44	26	18	45	37
Vocabulary	68	67	78	78	65	70
Literal Comprehension	74	78	45	50	60	69
Inferential Comprehension	72	88	36	50	48	67
Word Attack	36	23	32	37	22	19
Context Clues	56	43	30	36	47	35
Applied Reading	40	27	60	37	44	28

4.4 Instructional Practices: Conclusions

The picture which emerges from the combined data is one of increasing awareness of the importance of reading skills for secondary students created by the demand of the current secondary school curriculum, and the students' post school needs. Also evident is a willingness on the teachers' part to respond to the reading needs of these students. And, while the data seem to reveal an adequate and strengthening response, there are a number of factors which indicate that more could be done.

First, even in a limited sense, for a majority of secondary students there is no provision for the teaching of reading at all. Teachers indicate only 11% - 30% of secondary students receive specific reading instruction regularly.

Second, there is a shortage of personnel educated in methods of teaching reading at the secondary school level.

Third, while secondary school teachers agree on the primary importance of reading skill development at that level, they appear to actually spend relatively little time in developing these skills.

Finally, since secondary school teachers in the content fields agree that they have a vital role to play in developing reading skills relative to their subject areas, the lack of such programs must be of some concern.

For these reasons, optimism about the current interest in providing students with adequate reading instruction must be tempered with the realization that large scale improvement is a slow process and that far from ideal conditions still exist in too many schools.

4.5 General Summary and Conclusions

The Reading Assessment has investigated the nature and effect of reading programs at the Grade 8 and Grade 12 levels and has provided, therefore, a picture of the strengths and weaknesses of portions of the secondary reading program. As well, the study has provided an assessment of the current reading skills of students at the two grade levels across the province. Student performance was found to be generally satisfactory but some areas of weakness were also revealed. It becomes evident that teachers, by and large, agree on their primary reading objectives and incorporate similar methods into their classroom activities to achieve those objectives. It is equally clear that many factors are perceived as inhibiting optimum development of reading skills, among them teacher training and background, lack of suitable instructional programs and materials, and a need for change in emphasis in instruction, making all teachers responsible for skill development in reading. Certainly resources - financial and professional - should be allocated, or re-allocated, to resolve some of these major problems.

Specifically, the General Reports contain a series of suggestions and recommendations designed to indicate ways in which existing practices might be modified to improve learning outcomes in secondary reading. These recommendations are summarized in Chapter 5 of this report. Directed towards all segments of the educational community - including local and provincial curriculum and program developers, classroom teachers, planners of university and in-service training, trustees and the lay public - these recommendations range from general suggestions such as that of increasing emphasis on reading skill development, to specific suggested methods of changing classroom practice and curriculum such as that of inclusion of more expository reading material in student course work. Among the important recommendations were the needs to investigate the influences of television viewing, newspaper and magazine reading, student mobility and language background upon reading performance as well as the need to develop reading skills in comprehending functional materials such as advertisements.

The study also provides information that carries beyond the schools themselves. One of the most important is the need for teacher training institutions to ensure that all future teachers are receiving the background knowledge - academic, theoretical and practical - that will most fully develop the total range of secondary reading skills. The need for continuing education is apparent as well. The data of the survey also offer opportunities for further research in the area of reading instruction - research that may lead to further modifications of the educative process.

Finally, as a follow-up to Language: B.C. the present study has demonstrated that continuous monitoring of student performance is possible and useful. Also that concerned individuals from all strata of the educative process - teacher educators and ministry officials to public representatives - can work together effectively to conduct a large-scale assessment.

CHAPTER 5 - SUMMARY OF RECOMMENDATIONS

The following recommendations have been summarized from the general reports on Test Results (No. 1) and Instructional Practices (No. 2) and are grouped according to the institutions, groups, or individuals who should take responsibility for their implementation. Following each recommendation, reference is made to the report and the chapter containing information to substantiate the statement.

5.1 Local Administration and Organization

Recognizing that many of the difficulties perceived by teachers derive from actual organization of Reading programs, authors of the report urge schools and district to:

- provide adequate space, equipment and materials for reading instruction at the secondary level; (Report 2 Chapters 3 and 4)
- investigate the problem of the relationship between student mobility and reading performance; (Report 1 Chapter 3)
- pay continuing and increased attention to the problems which teachers see as inhibiting the effectiveness of their reading program inadequate or inappropriate teacher education and texts, and lack of public or administrative support; (Report 2 Chapters 3 and 4)
- ensure that only teachers with appropriate training or experience be hired to instruct in secondary reading programs. (Report 2 Chapters 3 and 4)

5.2 Local Curriculum Development

Realizing the importance of goals, performance levels and curricula being designed to meet local needs, the authors of the Report suggest that local schools and districts:

- attempt to implement and incorporate a full range of reading programs into the secondary school system; (Report 2 Chapters 3 and 4)
- attempt to develop and select suitable instructional materials especially in comprehension of expository materials as well as newspapers and periodicals. (Report 1 Chapter 3)

5.3 Provincial Program Development

Noting the responsibilities of the Ministry of Education to provide general guidelines and information, the authors urge the Ministry to:

- review reading and materials texts on a regular basis to identify appropriate materials and allocate funds for texts most efficiently; (Report 1 Chapter 3, Report 2 Chapter 4)
- give immediate attention to the provision of good texts in secondary reading instruction; (Report 1 Chapter 3)
- continue to develop an assessment program by developing a bank of test items to assess objectives so that curriculum changes can focus on the needs of each level. (Report 1 Chapters 2 and 3)
- examine the relative teaching loads of junior and senior secondary school teachers to bring about equity. (Report 2 Chapter 3)

5.4 Classroom Activities

Since teachers, in their views on goals and procedures, are strongly agreed on the nature of and approaches to reading instruction, the authors encourage teachers to continue to re-examine their goals and methods. Specifically, teachers are urged to:

- plan skill and concept development in reading so as to provide for an appropriate sequence and degree of learning; (Report 1 Chapter 3)
- explore and expand the range of reading materials available, perhaps by increasing the amount of expository and non-text material used; (Report 1 Chapter 3)
- re-allocate more time to the teaching of reading and English skills: (Report 2 Chapters 3 and 4)
- emphasize skill development in reading in the following specific areas of the reading process: (Report 1 Chapter 3)
    - word attack
    - scanning
    - integrating written and graphic information
    - identifying the theme or main idea
    - following directions
    - using the dictionary effectively
    - skimming
    - reading advertisements
    - comprehending expository materials
    - interpreting critically journalistic prose and advertisements
- give special attention as necessary to students who come from a non-English speaking background and those whose families are highly mobile
- give special attention to the opportunities and/or problems possibly created by television in secondary reading instruction.

5.5 University Preparation

Since teachers expressed a need for more training in reading instruction, universities are encouraged to:

- ensure that all teachers have appropriate academic backgrounds as well as necessary training in specific instructional methodology for secondary reading programs. (Report 2 Chapters 2 and 3)

5.6 In-Service

Recognizing the need for continuing education and development of the profession, the authors suggest:

- that professional organizations be encouraged to make greater efforts to increase membership and to develop workshops as more effective ways of disseminating information for reading instruction; (Report 2 Chapter 2)
- that school boards provide and schedule in-service opportunities in secondary reading instruction as a part of the professional development of all teachers; (Report 2 Chapter 2)
- that all teachers of secondary subjects become involved in a continuing dialogue about reading skill devlopment so as to formulate agreed-upon sets of expectations about student performance by drawing upon the experience of all those concerned; (Report 2 Chapters 2 and 3)
- that resource centres containing suitable instructional materials for secondary reading be made available. (Report 2 Chapters 3 and 4)

5.7 Research and Development

The Report raises many questions requiring further in-depth study; among them, the authors recommend for immediate attention:

- the development of local professional programs to clarify Objectives of secondary reading and to formulate appropriate instructional practices and assessment procedures; (Report 2 Chapters 2 and 3)
- continued research concerning the effects of the various student characteristics, such as age, language background, television watching, student mobility, newspaper and periodical reading and reading of books; (Report 1 Chapter 3)
- continued analysis of the Report itself which could yield further information. (Reports 1 and 2)

5.8 Distribution of Information

Finally, the authors noted that information about the educative process should be made available more fully and generally; hence the Report suggests:

- that detailed sections of the Report be made available for professional and public use; (Reports 1 and 2)
- that relevant information concerning student variables and their relationship to reading performance be made available to teachers and the public so that further development of goals and materials can be made; (Report 1 Chapter 3)
- that diagnostic assessment take place on a regular basis; (Report 1)
- that the report and its data be made available for continued and more detailed research. (Reports 1 and 2)

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APPENDIX A -

Guide to the B.C. Reading Assessment General Report

The following abbreviated tables of contents to the two major parts of the General Report for B.C. Reading Assessment are provided as a means of facilitating the reader's search for more specific information.

Report 1. Test Results

Chapter 1 Introduction

Chapter 2 Definitions of Domains and Objectives

Chapter 3 Results, Interpretations and Recommendations

- Introduction
- Overall Test Results - Grade 8 and Grade 12
  - Domain 1 - Word Meaning Identification
  - Recommendations
  - Domain 2 - Comprehension
  - Recommendations
  - Domain 3 - Applied Reading and Study Skills
  - Recommendations
- Inter-Level Results
  - Introduction
  - Grade/Year 4 and Grade 8
  - Grade 8 and Grade 12
  - Recommendations
- Performance by Reporting Categories - Grade 8 and Grade 12
  - Age
  - Sex
  - Number of Schools Attended since Grade 1
  - Place of birth
  - Length of Residence in Canada
  - Was language other than English spoken before Grade 1?
  - Is English usually spoken in the home?
  - Hours of TV viewing
  - Newspaper reading
  - Magazine article reading
  - Book Reading
- Grade 12 Categories
  - Father's occupation
  - Mother's occupation
  - Plans after leaving school

Appendices

Report 2 Instructional Practices

Chapter 1 Introduction

Chapter 2 Teacher Background and General Information

Chapter 3 Goals and Instructional Practices

Chapter 4 Language B.C. Survey Information

Chapter 5 Synthesis of Findings

APPENDIX B

Contributors to B.C. Reading Assessment

Contract Team

From the University of Victoria, the University of British Columbia and the Sooke School District, the Team developed the Tests and Questionnaire, interpreted the data, and wrote the reports as indicated.

Dr. Peter Evans, formerly Dr. Peter Evanechko,
(Chairman) Faculty of Education, University of Victoria
(Drafts of Summary Report, Sections of Reports 1 and 2, editing Reports 1 & 2)

Dr. Sheilah Allen, Faculty of Education, University of British Columbia
(Sections of Reports 1 and 2)

Dr. Robert Chester, Faculty of Education, University of British Columbia
(Sections of Reports 1 and 2)

Dr. Terry Johnson, Faculty of Education, University of Victoria
(Sections of Reports 1 and 2)

Dr. Walter Muir, Faculty of Education, University of Victoria
(Sections of Report 1, editing Reports 1 and 2, Technical assistance)

Mrs. Kathleen Pye, Spencer Junior Secondary School, Sooke School District
(Sections of Reports 1 and 2)

Assistance was also provided by Dr. W. John Harker of the Faculty of Education, University of Victoria; Mr. Charles Kinzer, Abbotsford School District and Carole Tarlington, Vancouver School District.

Management Committee

The Management Committee advised, commented on, and gave final approval to the questionnaires, tests, procedures, and various drafts of the Report.

Mr. Robert Aitken (Chairman), Consultant, Learning Assessment Branch, Ministry of Education
Mr. Wilfrid Bennett, Trustee, West Vancouver School District
Mrs. Olga Bowes, Research Officer, Learning Assessment Branch, Ministry of Education
Mr. Keith Cameron, Supervisor, Prince George School District
Mrs. Jacqueline Eccles, Killarney Secondary School, Vancouver School District
Dr. Peter Evans, Faculty of Education, University of Victoria
Dr. Jerry Mussio, Director, Learning Assessment Branch, Ministry of Education
Dr. Jaap Tuinman, Faculty of Education, Simon Fraser University

The Contract Team wishes to make special mention of the outstanding efforts of Mrs. Helen Harris, secretary in the Division of Communication and Social Foundations, in the typing of all reports for this Assessment.

READING REVIEW PANELS

APPENDIX C

Review panels consisting of educators and members of the lay public were organized in the autumn of 1976 at four provincial centres to examine and amend the proposed objectives of the reading assessment before the student tests were developed.

Castlegar Review Panel

Mrs. Margaret Carmichael, Homemaker, Castlegar
Mr. Michael Chapman, Teacher, Castlegar School District
Mr. Rod Dallas, Co-ordinator of Special Education, Penticton School District
Mr. Paul Downey, Teacher, Fernie School District
Mr. Chris Dryvynsyde, Teacher, Arrow Lakes School District
Mr. John Dunne, Teacher, Nelson School District
Mr. Daniel Fossey, Teacher, Cranbrook School District
Mr. George Fraser, Teacher, Vernon School District
Mr. Ian Hamilton, Teacher, Nelson School District
Mr. Lloyd Hamilton, Teacher, Fernie School District
Mr. Charles Hart, Teacher, Penticton School District
Mrs. Jeannette Horning, Homemaker, Castlegar
Mr. Dennis Johnston, Selkirk Community College, Castlegar
Mrs. Anne Jones, School Board Member, Castlegar School District
Mr. James Magee, Teacher, Cranbrook School District
Mr. William Sang, Teacher, Castlegar School District
Mr. Frank Santesso, Teacher, Trail School District
Mrs. Judy Stevely, Teacher, Cranbrook School District
Mrs. Adele Yule, Homemaker, Castlegar

West Vancouver Review Panel

Mrs. Ann Barker, Homemaker, West Vancouver
Mr. Wilfrid Bennett, School Board Member, West Vancouver School District
Ms. Carol Bourne, Teacher, Richmond School District
Ms. Jane Catalano, District Reading Teacher, Surrey School District
Mrs. Mary Allan, Homemaker, West Vancouver
Mr. Robert DeForest, Teacher, Coquitlam School District
Mrs. Jacqueline Eccles, Teacher, Vancouver School District
Mrs. Barbara Fulcher, Homemaker, West Vancouver
Mr. George Hawksworth, Teacher, New Westminster School District
Mr. John Hannah, Teacher, New Westminster School District
Mrs. Mary Hickley, Homemaker, West Vancouver
Mrs. Margaret Ibbott, Homemaker, West Vancouver
Mrs. Margaret Jaffary, Homemaker, West Vancouver
Mrs. Elizabeth Jukes, Teacher, Surrey School District
Mr. Allan Jessup, Newspaper Editor (Retired), West Vancouver
Mr. Gerald McCann, Teacher, Vancouver School District
Mr. Vaughan McCormick, Teacher, Langley School District
Ms. Effie MacRae, Teacher, Delta School District
Mr. Arnald Muir, Teacher, North Vancouver School District
Mrs. Marjean Park, Homemaker, West Vancouver
Mr. William Schmierbach, Teacher, Chilliwack School District
Mr. Gary Temlett, Teacher, Vancouver School District
Mrs. Lillian Thiersch, School Board Member, West Vancouver School District

Prince George Review Panel

Mr. Fred Allan, Teacher, North Thompson School District
Mr. William Atkinson, Teacher, Quesnel School District
Mr. Gary Blattner, Teacher, Nechako School District
Mr. Keith Cameron, Co-ordinator, Prince George School District
Ms. Allison Candela, Teacher, Smithers School District
Mr. Lino Colonello, Teacher, Nechako School District
Mr. Barrie Eyre, Teacher, Peace River North School District
Mrs. Mia Gordon, Teacher, Kamloops School District
Mr. Raymond Hellman, Teacher, Kamloops School District
Mrs. Eva Kettle, School Board Member, Prince George School District
Ms. Jill Lebedoff, Teacher, Quesnel School District
Mr. Malcolm McMurray, Teacher, Prince George School District
Mr. Walter Schoen, Teacher, Peace River South School District
Mr. Terry Smith, Teacher, Prince George School District
Mr. Robert Strain, Teacher, Prince George School District
Mr. Richard Szanik, Teacher, Prince George School District
Ms. Margaret White, Teacher, Prince George School District

Victoria Review Panel

Mr. Robert Argall, Teacher, Courtenay School District
Ms. Janet Arnold, Teacher, Sooke School District
Mrs. Valerie Finding, Homemaker, Victoria
Mr. Craig Gillis, Teacher, Campbell River School District
Mr. Ray Gullison, Teacher, Nanaimo School District
Mr. Gary Jacobi, Teacher, Victoria School District
Mr. Jon Korrison, Teacher, Gulf Islands School District
Ms. Theresa Kratzer, Principal, North Vancouver School District
Mrs. Marilyn Lidster, Teacher, Sooke School District
Mrs. Margaret Nelson, Homemaker, Victoria
Mr. Larry Owen, Teacher, Victoria School District
Mr. Roy Plater, Teacher, Nanaimo School District
Mrs. Kathleen Pye, Teacher, Sooke School District
Mrs. Marlene Recchi, Teacher, Victoria School District
Ms. Norma Richardson, Teacher, Qualicum School District
Mrs. Lana Simpson, Teacher, Victoria School District
Mr. Brian Sulsbury, Vice-Principal, Lake Cowichan School District
Mr. D. L. Tait, Teacher, Qualicum School District
Mr. John Warren, Correspondence Branch, Ministry of Education, Victoria
Mrs. Barbara Williams, Director, University of Victoria Day Care Centre, Victoria
Mrs. Norma Wilson, Homemaker, Victoria

APPENDIX D

PILOT TESTING

The authors of this report are grateful to the administrators, staff and students of the following schools which participated in piloting the student tests in the autumn of 1976.

Grade 8

Alpha Secondary, Burnaby School District
Cedar Hill Junior Secondary, Victoria School District
Lakewood Junior Secondary, Prince George School District
Lambrick Park Secondary, Victoria School District
Lansdowne Junior Secondary, Victoria School District
S. J. Willis Junior Secondary, Victoria School District
Spencer Junior Secondary, Sooke School District

Grade 12

Alpha Secondary, Burnaby School District
Esquimalt Senior Secondary, Victoria School District
Mount Douglas Secondary, Victoria School District
Oak Bay Senior Secondary, Victoria School District
Prince George Secondary, Prince George School District
Spectrum Community School, Victoria School District
Victoria Senior Secondary, Victoria School District

Further Pilot Testing

The following three schools were used to pilot the student tests for time and passage dependency.

Belmont Secondary, Sooke School District
Killarney Secondary, Vancouver School District
Oak Bay Junior Secondary, Victoria School District

INTERPRETATION PANELS

APPENDIX E

Each of these two panels contributed to the interpretation of test results at one of the assessment levels by rating the pupil performance on each item.

Grade 8 Test Interpretation Panel

Mrs. Lorna Bateman, Public Librarian, Richmond
Ms. Allison Candela, Teacher, Smithers School District
Mrs. Betty Clark, School Board Member, Burnaby School District
Mr. Wayne Cruchley, Canada Manpower Executive, Vancouver
Mr. George Hawksworth, Teacher, New Westminster School District
Dr. Betty Horodezky, Faculty of Education, University of British Columbia
Ms. Anne Huntzicker, Teacher, Vancouver School District
Mr. Charles Kinzer, Teacher, Abbotsford School District
Mr. Roy Lister, Director, Victoria School District
Ms. Jane Lizée, Teacher, Burnaby School District
Mr. Alan Moodie, Supervisor, Vancouver School District
Dr. Sheila O'Connell, Faculty of Education, Simon Fraser University
Mrs. Marlene Recchi, Teacher, Victoria School District
Ms. Carole Tarlington, Consultant, Project BUILD, Vancouver School District
Mrs. Daphne Temple, School Board Member, Victoria School District

Grade 12 Test Interpretation Panel

Mr. Robert Chapin, Teacher, Burnaby School District
Mr. Rick Cooper, Teacher, Vancouver School District
Mr. Robert DeForest, Teacher, Coquitlam School District
Dr. Paul LeMarre, Faculty of Education, University of British Columbia
Ms. Effie MacRae, Teacher, Delta School District
Dr. Graham Mallett, Faculty of Education, University of British Columbia
Mrs. Viviane McClelland, Supervisor, Richmond School District
Mrs. Erica Meeker, School Board Member, Maple Ridge School District
Mrs. Joanne Ryeburn, Teacher, New Westminster School District
Mrs. Lana Simpson, Teacher, Victoria School District
Mr. Robert N. G. Smith, School Board Member, Victoria School District
Mrs. Joan Swan, Continuing Education Instructor, Richmond School District
Mrs. Heather Van Holderbeke, Teacher, Prince George School District

APPENDIX F

Timetable for B. C. Reading Assessment

Background research for goals	1976 - May
Designing of Tests	May
Revision of Test and Review Panels	September - October
Designing of Questionnaire	September - October
Pilot Studies	October - November
Printing and Distribution of Reading Assessment	1977 - January - March
Reading Assessment in Schools	March
Scoring of Tests and Questionnaires	April - May
Interpretation of Reading Results	June
Preparation and Revision of General Reports	June - August
Preparation and Revision of Summary Reports	June - September
Publication of Reports	October

APPENDIX G

Results of Grade 8 Reading Assessment Performance as interpreted by the Panel

	Mean Percent Correct	Performance Rating
DOMAIN 1 - WORD MEANING IDENTIFICATION	62	----------
Objective		
Structural Analysis: Use specific structural elements to help identify word meaning	73	Very Satisfactory
Context: Identify the meaning of a word by using the words around it	64	Satisfactory to Very Satisfactory
Synonymy: Identify the meaning of a word by choosing the appropriate synonym	49	Satisfactory to Marginally Satisfactory
DOMAIN 2 - COMPREHENSION	60	----------
Objective		
Literal Comprehension: Identify or remember elements in material read	64	Satisfactory
Interpretive Comprehension: Paraphrase, infer, relate of generalize from elements in the material read	56	Satisfactory
DOMAIN 3 - APPLIED READING AND STUDY SKILLS	62	
Objective		
Application Forms: Follow directions in completing an application form	70	Satisfactory
Dictionary: Find appropriate word meanings and information on word origins	62	Satisfactory
Advertisements: Identify integral information in classified advertisements	72	Satisfactory
Advertisements: Identify integral information in descriptive advertisements	48	Marginally Satisfactory
Newspapers and Periodicals: Comprehend journalistic prose	61	Marginally Satisfactory

Results of Grade 12 Reading Assessment Performance as interpreted by the Panel

	Mean Percent Correct	Performance Rating
DOMAIN 1 - WORD MEANING IDENTIFICATION	82	----------
Objective		
Structural Analysis: Use specific structural elements to help identify word meaning	85	Satisfactory
Context: Identify the meaning of a word by using the words around it	82	Satisfactory to Very Satisfactory
Synonymy: Identify the meaning of a word by choosing the appropriate synonym	80	Satisfactory
DOMAIN 2 - COMPREHENSION	69	---------
Objective		
Literal Comprehension: Identify or remember elements in material read	73	Satisfactory
Interpretive Comprehension: Paraphrase, infer, relate or generalize from elements in the material read	66	Satisfactory
DOMAIN 3 - APPLIED READING AND STUDY SKILLS	81	----------
Objective		
Application Forms: Follow directions in completing an application form	81	Marginally Satisfactory
Dictionary: Find appropriate word meanings and information on word origins	77	Satisfactory
Advertisements: Identify integral information in classified advertisements	90	Very Satisfactory
Advertisements: Identify integral information in descriptive advertisements	73	Marginally Satisfactory
Newspapers and Periodicals: Comprehend journalistic prose	86	Marginally Satisfactory